

Many of the achievements of the **c>ways** team are world class and have been converted to standard practices with the private and public sector.

Providing solutions, delivering results

In today's rapidly developing surveillance and building security industry, new breeds of integrator companies are embracing the Ethernet and Internet connected products markets, using them to develop new, and future, proof enterprise scale solutions.

One such company is C>Ways, based in the North of England. They have carried out three years R&D in the development of Ethernet based technologies that can be used to increase the potentials of traditional CCTV and Building Security Solutions. C>Ways believe that Ethernet and Internet based technology has the power and flexibility to break many of the long standing barriers presented with traditional designs.

TCPIP as a transport medium removes the need for proprietary infrastructures and allows even the smallest of installations to expand to enterprise and global scale. Every organisation employs TCPIP in some form, whether it is a global wide area data network or even an ISDN or ADSL link to the internet. With this potential, Ethernet based products can now provide us with a global building security system, monitored and managed from any part of the network.

It can further be seen that all CCTV and building control systems can be interfaced and synchronised, providing true building management and control from a common management environment. This means that lights, heat, access control and CCTV, communicating together, can now provide us with the required tools to fully manage an estate. As well as this, the linked approach to building management can now provide us with the tools to control energy use within a building and, therefore, reduce its running costs.

Where many organisations take broadband internet services as part of their service delivery, within a 24 hour period the broadband connection is used for business purposes during business hours only. There is, therefore, a large portion of the day when the broadband connection is left dormant.

This dormant bandwidth can be put to good use. Taking a typical school as an example; during working hours the school provides education services to its students who make use of the internet as a research medium. When the school closes at the end of the day, internet use stops, with the exception of minor email traffic.

We now have a school with expensive equipment and, generally, no manned security. If the school were to install a CCTV system based on Ethernet and Internet technology, the building would continue to be monitored by remote staff.

Use can now be made of the internet connection remotely from a monitoring station anywhere in the world.

However, in these current times of transition from traditional technologies to new Internet based technologies, we have a dilemma. Products are designed in a proprietary manner, with very little integration capability. For example, Ethernet based video servers used in the CCTV market generally work with a proprietary piece of PC software. When we need to mix video quality by mixing video server types, i.e. MJPEG and MPEG systems combined, we find that we need to use two software platforms to manage the complete network. Additionally, if we now want to introduce building and heating controls via Ethernet we have a further group of PC software platforms to manage. A final total building solution will therefore comprise of more than 5 PC devices, each one running a different software platform, with none of them capable of inter-communication, relying on human intervention to provide a total managed solution.

With the development of XML, HTML, XHTML and SQL, a set of standards based software languages and databases which are open source and free, a serious look can now be taken at creating a set of applications that can fully integrate with each other, and offer true overall management. XML, like HTML and XHTML is a "mark-up" language, but with a difference. It uses database schemas, i.e. each object (a camera, a door relay, a heating valve, a window, etc) referred to in the XML script has every bit of information required to drive the required object. Any object can then be added by creating the relevant schema object. XML and XHTML are then used to create applications that make use of the XML object.

These tools now provide us with a method for creating applications that can be either enhanced with other services and "objects" or integrated with another application. The future for C>Ways is in XML and the development of objects that can be used to create applications that take advantage of the Internet and Converged digital environment. Imagine a single infrastructure that can manage every aspect of a building, locally and globally, from any location on that infrastructure. That same infrastructure, which today carries data and voice information, will, in future, carry every bit of information generated by a building: energy use, lighting and heating control, access control and security from door entry to PC authorisation, CCTV Video, training video, data and voice. All this is made possible by standards like XML.